REMARKS

The foregoing amendment is submitted to provide a new set of claims which address the claim rejections under 35 U.S.C. Section 112 and 35 U.S.C. Section 103. The new claims 71-83 find corresponding support in the specification as specifically outlined below and clearly distinguish over the art of record, Schmidt et al., (U.S. Patent No. 5,288,408).

New generic claim 71 includes a preamble and three process steps. The preamble of the claim is identical to the preamble of former generic claim 1 and is therefore deemed fully supported in the application as filed.

Step (a) of claim 71 is directed to combining the waste material (which contains gelatin) and a solvent for the gelatin under conditions sufficient to form a first liquid containing gelatin. Reference to "under conditions sufficient" is specifically directed to the rejection of the claims under 35 U.S.C. Section 112 in which it was alleged that the process is incomplete for omitting essential steps. The conditions necessary to form the first liquid make it clear that after the waste material and solvent have been combined, the resulting combination is a liquid which will eventually be separated into two layers, a solvent based layer and a non-solvent based layer both of which, of course, are liquids. Thus, this amendment to step (a) of the claimed process makes it clear that the method involves treatment of a liquid and thus eliminates the possibility of solidification as referred to in paragraph 12 of the Office Action.

Step (a) has also been amended to indicate that the waste material contains at least one first component which cannot effectively be separated from the first liquid as part of a non-solvent based layer. This language is being inserted into claim 71 in order to make it clear that the claimed process is directed towards the treatment and removal of such first components which end up in the solvent based layer after the same has been separated from the non-solvent based layer. Support for the amendment of this portion of step a) of the generic claim is described below.

Reference is first made to page 13, lines 11-13 wherein it is stated that the separated solvent based layer (e.g. aqueous layer) contains particulates and/or oily type materials (the contaminants of interest in the present invention). The aqueous layer may be treated to remove these contaminants by means of processes more fully described beginning on page 13, line 14. Such processes include, but are not limited to, liquid:liquid centrifugation, submicro/micro-filtration and coalescers (see new claims 73 and 74). As indicated at page 9, lines 1-3 the solvent based layer is defined as a layer or phase in which the components contained therein are dissolved in the solvent. As to the components which do not dissolve in the solvent they are removed from the waste stream through the non-solvent based layer in step (b) of the process. As will become more fully apparent from the discussion below, the present invention is principally concerned with removing those contaminants which reside in the solvent based layer and not in the non-solvent based layer which is the subject of the reference cited herein (U.S. Patent No. 5,288,408).

Thus, reference to a waste material containing at least one first component which does not end up in the non-solvent based layer but resides in the solvent based layer is fully supported in the application as filed.

Step (b) requires separating the first liquid into a solvent based layer and a non-solvent based layer. This step of the process remains essentially unchanged from the claims as originally filed except that reference is now made to what is contained in the solvent based layer namely gelatin and the at least one first component. Thus, it is also clear that the present process concerns removing contaminants (i.e. first component) from the solvent based layer. These first components have an affinity for the solvent and thus reside in the solvent based layer and do not end up in the non-solvent based layer.

Step (c) concerns treating the solvent based layer with a process which removes the first component from the solvent based layer to form a second liquid containing gelatin having a higher purity than the first liquid. The gelatin in the second liquid has a higher purity because it is at least substantially devoid of the first component because the claimed process removes the first component from the solvent based layer. It is clear from reading the specification that the language now employed in step (c) is fully supported in the application as filed.

As previously indicated, the first components have an affinity for the solvent based layer. The present process as described, for example, beginning at page 13, line 11 concerns removing the first component from the solvent based layer. As specifically

indicated at page 13, lines 11-13, the most common examples of the first component are particulates and/or oily type materials. New claim 72 covers these specific first components. It will be noted in claim 72 that the oily type materials and/or particulates are specifically those having an affinity for the solvent. It will be further understood that some oils are incompatible with the solvent and therefore gravitate toward the non-solvent based layer and are removed in step (b) of the claimed process. Indeed, page 9, lines 11-14 refer to the non-solvent based layer (i.e. non-aqueous layer) being treated to separate oily components therefrom. Accordingly, claim 72 provides that the oily type materials are those having an affinity for the solvent and therefore are limited to those materials that are to be removed from the solvent based layer and not the non-solvent based layer.

New claim 74 is directed to a preferred type of filter for accomplishing the purposes of the present invention (i.e. a tangential flow type filter) as disclosed at page 15, lines 15-17.

New claims 75 and 76 essentially correspond to original claims 7 and 8. New claims 78-79 essentially correspond to original claims 13 and 14. Each of these new claims specifically recites that the waste material contains an oily type material and a particulate to provide proper antecedent basis for the remaining portion of the respective claims.

New claim 79 essentially corresponds to original claim 15. New claims 80-83 essentially correspond to original claims 22, 24, 26 and 27.

It is therefore submitted that the claims submitted as part of the present amendment find corresponding support in the specification as filed and entry thereof is deemed proper and is respectfully requested.

As previously indicated, the present invention is directed to a process by which a waste material containing gelatin is further treated to remove contaminants (i.e. first components) from the waste material which have an affinity for the solvent. The waste material is combined with a solvent (e.g. water) to form a first liquid. The solvent dissolves the waste gelatin material to form a solution of gelatin and glycerin (i.e. solvent based layer which may contain contaminants identified herein as "first components" such as oily type materials and particulates) within the remaining oily component and residual active components which are present in the non-solvent based layer (see page 8, line 19 to page 9, line 7). The non-solvent based layer is separated from the solvent based layer. At this juncture, the process disclosed in Schmidt et al. (U.S. Patent No. 5,288,408) and the present application are identical. It will be noted that the separation of the non-solvent based layer from the solvent based layer is not a 100% exact science. Using skimmers and sight glasses will effectively remove substantially all, but typically not all of the contaminants which have an affinity for the non-solvent based layer. The Schmidt et al. '408 process as more fully discussed below, is concerned with removing the remaining trace amounts of the non-solvent based contaminants from the non-solvent based layer but does not teach or suggest any process for removing contaminants which have an affinity for the solvent based layer and which are not removed by step (b) of the present process.

To the contrary, the present invention is concerned with removing contaminants of the waste stream (i.e. first components) which have an affinity for the solvent based layer and therefore are not removed in step (b) of the present process.

In this regard, the Schmidt et al. '408 Patent is clear that the contaminants being removed are those having an affinity for the non-solvent based layer and the only treatment performed on the solvent based layer is the removal of remaining traces of those contaminants which have an affinity for the non-solvent based layer. More specifically, Schmidt et al. discloses beginning at column 4, line 1 the separation of the lower aqueous phase (solvent based layer) from the upper oil phase (non-solved based layer) by a sight glass. Schmidt et al. goes on to say that the upper phase (non-solvent based layer) may contain the lubricating or coating oils, active ingredients, colorants and preservatives which may themselves be subject to certain novel recycling techniques. As indicated in the sentence beginning at page 4, line 16 the subject invention (i.e. the invention of the '408 Patent) provides a method for more efficient recovery of active ingredients (referred to above as contained within the upper non-solvent based layer).

Insofar as the lower phase (solvent based layer) is concerned, column 4, line 22 of Schmidt et al. indicates that it is filtered to remove "any remaining traces of oil or other contaminants". The only oil or other contaminants referred to the in '408 Patent specification are those that reside in the non-solvent layer. Thus, Schmidt et al. uses certain types of filter equipment to remove the last remaining traces of contaminants that spilled over from the separation process of step (b) so that the filtrate containing

gelatin and glycerin is not contaminated with these non-solvent based contaminants. This is the only reasonable interpretation that can be applied to the clear teaching of the '408 specification. Thus, the description on page 3, paragraph 9 of the Office Action concerning what is fairly taught by the '408 Patent and particularly the reference to the removal of "any traces of oil or other contaminants" is a misreading of what is fairly taught in the '408 Patent.

Finally, paragraph 14 of the Office Action refers to the previously submitted Declaration of William Schmidt in which it is stated that the Declaration fails to provide sufficient probative evidence to establish the "inoperability" of the '408 Patent, unexpected results or commercial success. This ground of rejection is improper and is respectfully traversed. There is nothing in the previously submitted Declaration which establishes or intended to establish the inoperability of the '408 Patent. The Declaration clearly shows, however, that the process fairly taught in the '408 Patent is not directed to the removal of contaminants which have an affinity for the solvent based layer but rather concerns the removal of contaminants which have an affinity for the non-solvent based layer, but which may not have been fully removed during the separation of the non-solvent based layer from the solvent based layer.

Furthermore, the Office Action states that the Declaration "confuses the standard of obviousness as in "would have been obvious" with an actual, or in-fact standard as in "was obvious". There is only one standard of obviousness and that is whether or not the person of ordinary skill in the art, based on a fair reading of the '408 Patent" would arrive at the claimed invention in the absence of undue experimentation. As previously

indicated, the Schmidt et al. '408 Patent does not provide guidance to one of ordinary skill in the art on how to remove contaminants having an affinity for the solvent based layer but only how to remove contaminants which have an affinity for the non-solvent based layer. One of ordinary skill in the art could therefore not arrive at the presently claimed invention in the absence of undue experimentation. For these reasons, the presently claimed invention is not obvious from that fairly taught by the '408 Patent given the level of ordinary skill of those in the waste gelatin art.

The Office Action further states that economic considerations are not a factor when determining obviousness. It is well established that the Patent and Trademark Office must give secondary considerations due weight in assessing patentability of claims. In re Sernaker 217 USPQ1 (Fed. Cir. 1983). Those secondary considerations include but are not limited to commercial success, failure of others, long-felt need, and unexpected results. Certainly, economic considerations such as the possibility of saving millions of dollars is an element of objective evidence which would be relevant to commercial success and long-felt need. Therefore, the comment made in the Office Action that economic considerations is not a factor when determining obviousness is improper.

Finally, the Office Action alleges that Applicant is required to insert into the claims results obtained in a comparative test (e.g. the prior art gelatin had a "milky white"). This ground of rejection is improper and should be withdrawn.

The Declaration submitted in response to the previous Office Action demonstrated that when using a filter system clearly taught by the '408 Patent on a waste stream containing contaminants having an affinity for the solvent based layer, the system did not remove those contaminants which resulted in the filtrate having a "milky white" appearance. To the contrary, the present invention which is directed to a system whereby contaminants are removed from a solvent based layer to produce a "clear" waste product. This shows a surprising and unobvious result and nothing in the '408 Patent teaches or suggests this result.

In view of the foregoing, Applicant submits that the present application is in condition for allowance and early passage to issue is therefore deemed proper and is respectfully requested.

It is believed that no fee is due, however, if any fee is due it should be charged to Deposit Account No. 23-0510.

Respectfully submitted,

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